

COMPOSITIONS AND METHODS FOR THE DELIVERY OF  
OLIGONUCLEOTIDES VIA THE ALIMENTARY CANAL

## ABSTRACT

5       The present invention relates to compositions and  
      methods which enhance the transport of nucleic acids,  
      especially oligonucleotides at various sites in the alimentary  
      canal of an animal. The methods and compositions enhance the  
      transport of oligonucleotides across the mucosa of the  
10   alimentary canal via the use of one or more penetration  
      enhancers. The invention features the use of various fatty  
      acids, bile salts, chelating agents and other penetration  
      enhancers, as well as carrier compounds, to enhance the  
      stability of nucleic acids and/or their transport across and/or  
15   into cells of the alimentary canal. In one preferred  
      embodiment, the compositions and methods of the invention are  
      utilized to effect the oral delivery of an antisense  
      oligonucleotide to an animal in order to modulate the  
      expression of a gene in the animal for investigative,  
      therapeutic or prophylactic purposes.

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